

539

DART AEROSPACE LTD	Work Order:	24/197
Description: 206 GHW adapter (to adapt Std Bell wheels)	Part Number:	D206-651-041
Dwg: D206-651 Rev. B, D2690 Rev. B	Qty:	30
		Page 1 of 1

Step	Location	Procedure	By	Date	Qty																																
1	DC	Issue Traveller	AP	05/09/07	30																																
2	DC	Photocopy bluefile & type labels per PPP D206-651-041 AP 05/17/7	Dit	05-09-21	30																																
3	PG	Issue P/O: 2008602 PNT-9 Lock Pin	AP	05/09/07	30																																
4	RG	Receive and Inspect for transit damage. Ensure that material release note is attached.	CL	05/09/27	30																																
5A	GA	Drill as per Dwg D2711. Debur.	DL	05.11.02	27																																
5b	GA	Debur.	DL	05.11.09	27																																
6	QC5	Inspect work to Step 5.	2	05.11.09	27																																
7	PG	Issue P/O 2008912 Cad Plate per QQ-P-416F Class I Type II	AP	05/11/17	27																																
8	RG	Receive and inspect Cad Plate for transit damage. Ensure C of C attached.	1	05/11/22	27																																
9	GA	Pick: <table><thead><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr></thead><tbody><tr><td>1</td><td>D2692</td><td>Spring pin</td><td>M6207</td></tr><tr><td>1</td><td>D2711</td><td>Pin</td><td>B24320824197</td></tr><tr><td>4</td><td>AN960JD10</td><td>Washer</td><td>M17634</td></tr><tr><td>21"</td><td>CBL-1240</td><td>Cable</td><td>M17793</td></tr><tr><td>4</td><td>CBL-460</td><td>Loop sleeve</td><td>M18473</td></tr><tr><td>2</td><td>MS21042L3</td><td>Nut</td><td>M17652</td></tr><tr><td>2</td><td>MS27039-1-08</td><td>Screw</td><td>M18057</td></tr></tbody></table>	Qty	Part Number	Description	Batch	1	D2692	Spring pin	M6207	1	D2711	Pin	B24320824197	4	AN960JD10	Washer	M17634	21"	CBL-1240	Cable	M17793	4	CBL-460	Loop sleeve	M18473	2	MS21042L3	Nut	M17652	2	MS27039-1-08	Screw	M18057	DL	05/11/23	27
Qty	Part Number	Description	Batch																																		
1	D2692	Spring pin	M6207																																		
1	D2711	Pin	B24320824197																																		
4	AN960JD10	Washer	M17634																																		
21"	CBL-1240	Cable	M17793																																		
4	CBL-460	Loop sleeve	M18473																																		
2	MS21042L3	Nut	M17652																																		
2	MS27039-1-08	Screw	M18057																																		
10	GA	Cut cable CBL-1240 in half (10.5" each). Remove 2.25" of sleeve from each end of cable CBL-1240.	DL	05/11/23	27																																
11	GA	Crimp CBL-460 onto CBL-1240 to make (2) D2690-8 as per Dwg D2690. (Leave one end open)	DL	05/11/23	27																																
12	GA	Install Lanyard D2690-8 (from open end) into pin D2711 and assemble screw, washer and nut as per Dwg D206-651.	DL	05/11/23	27																																
13	GA	Install Lanyard D2690-8 into spring pin D2692 and assemble screw, washer and nut at other loop as per Dwg D206-651.	DL	05/11/23	27																																
14	QC5	Inspect for completeness of W/O	2	05.11.30	27																																
15	ST	Package as per PPP D206-651-041 LOC: 324	1	05/12/01	27																																
16	AC	Cost / part	Sur	05.12.05	27																																
17	DC	Close W/O Inspect Level 21	19	05/12/02	27																																

Rev	Date	Change	Revised By	Approved
A	97.12.08	New Issue	BW	
B	98.09.10	Change part No. Step 1 & 2	CS	
C	99.11.17	Re-format	EC	
D	00.04.12	Changes to Pick list	EC	
E	00.06.14	Changed part # to -041 (mpp 2063)	EC	
F	02.08.14	Re-format	KJ	

PTO

Adj 363

RELEASED
02/03/22 RF

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector	

NCR: 24197		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
05-11-02	5	8 parts scrap. mat'l too hard. (Took some PNT-9 from stock) Qty 5 B# m8280	ASD	Destroy & replace with	EC 05-11-02	2 05-11-09	ASD 05-11-02	2 05-11-09
05-11-29	B	5 lanyards frayed very badly above loopsleeve	ASD	Scrap And replace 8" lanyard (M17793)	DL 05-11-30	2 05-11-30	ASD 05-11-29	2 05-10-29

Part No: D206-651-041 PAR #: N/A Fault Category: Supplier/Marco NCR: Yes No DQA: 2 Date: 05/12/02

NOTE: Date & initial all entries

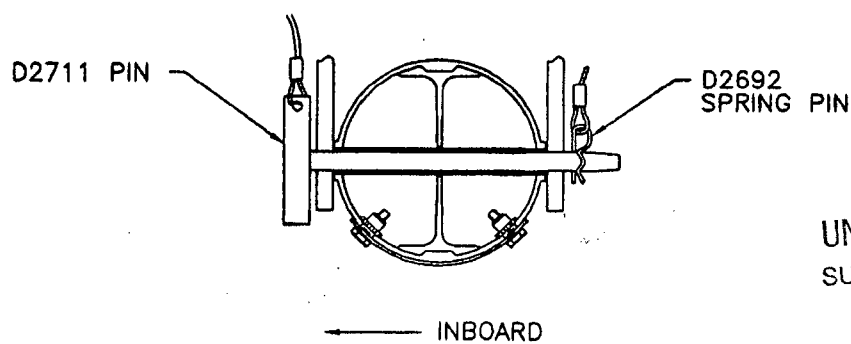
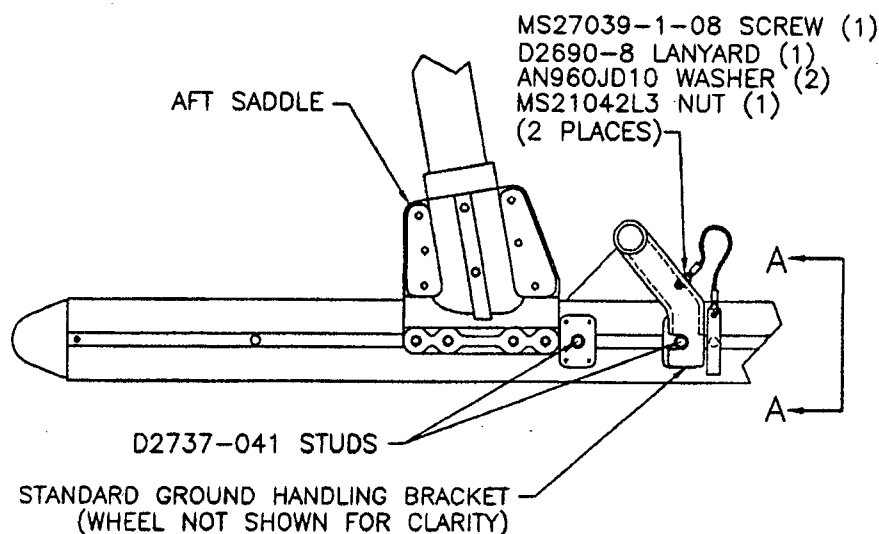
QA: N/C Closed: KJ Date: 05.12.02

DART

DESIGN <i>MM</i>	DRAWN BY <i>MM</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED <i>KE</i>	APPROVED <i>JS</i>	DRAWING NO. D206-651	REV. B SHEET 1 OF 1
DATE 98.01.27		TITLE GND. HANDLING WHEEL (GHW) INST.	SCALE NTS
A	97.11.03	NEW ISSUE	
B	98.01.27	D2688 REPLACED BY D2737-041	

TO ADAPT STANDARD BELL GROUND HANDLING WHEELS TO DART 206A/B SKIDTUBES:

1. ATTACH D2711 PIN AND D2692 SPRING PIN TO THE GROUND HANDLING BRACKET BY DRILLING $\phi 0.191$ HOLES IN THE FWD FACE OF THE BRACKET AND USING THE LANDYARDS AND HARDWARE PROVIDED.
2. THE STANDARD BRACKET PICKS UP ON THE STUDS IN FRONT OF THE AFT SADDLE. SLIDE INTO PLACE AND INSTALL THE PIN SUPPLIED TO PREVENT THE UNIT FROM SLIPPING DURING GROUND HANDLING (SEE BELOW).
3. GROUND HANDLE IN THE NORMAL FASHION.
4. REMOVE THE BRACKET FOR FLIGHT. LEAVE THE PINS ATTACHED TO THE BRACKET.



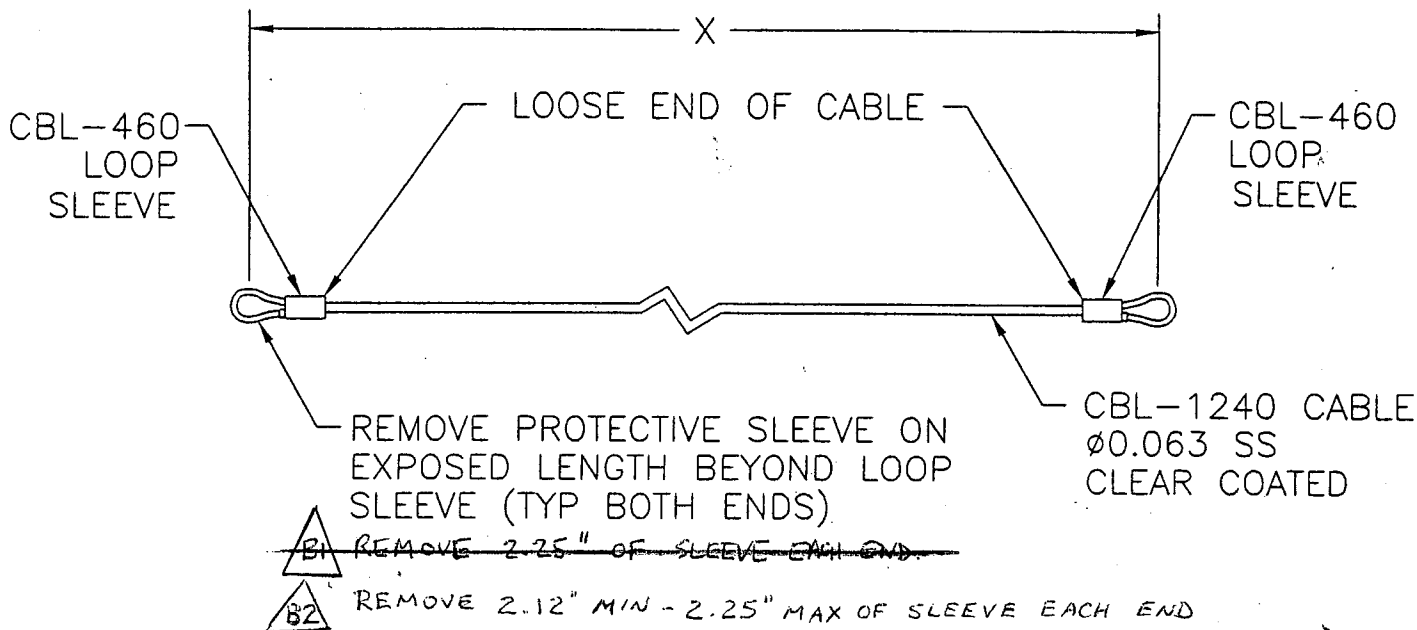
VIEW A-A

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO DISCREPANCY
WITHOUT NOTICE
WORK ORDER
NO. 24197



DESIGN <i>ME</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED <i>ME</i>	APPROVED <i>BW</i>	DRAWING NO. D2690	REV. B SHEET 1 OF 1
DATE 97.10.02		TITLE LANYARD ASSEMBLY	SCALE NTS
A	97.07.03	NEW ISSUE	
B	97.10.02	REVISED NOTE FOR ADDITIONAL LENGTH	
B1	CP 01.08.20	ADD NOTE TO REMOVE 2.25" OF SLEEVE	
B2	CP 04.06.24	ADDED TOLERANCE	

RELEASED
971003 KE
TSR A374



D2690-X

X = LENGTH IN INCHES

NOTE: CUT CABLE 2.50* INCHES LONGER THAN 'X' LENGTH. FOLD ENDS TIGHT TO 'X' LENGTH AND CRIMP WITH SLEEVE AT END OF LOOSE END OF CABLE WITH CBL-705 CRIMPING TOOL. *ADDITIONAL LENGTH MAY BE NECESSARY IN SOME APPLICATIONS. CUT AS REQUIRED.

NOTE: IN SOME CASES, END HAS TO BE CRIMPED AFTER ASSEMBLY WITH ATTACHING PARTS.

UNCONTROLLED COPY
RETURN TO
ENGINEERING
SUBMITTAL
IN FORCE
WORK ORDER
NO. 24197

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Sep 02, 2005
09:01 am

Work Order No : 0024197
Project Name : *D206-651-041
Project For : WK539
Work Order Type : Main
Main WO Number :
House Part Number : *D206-651-041
Description : 206 A/B GHW Kit
Manufactured : Yes
Amount Req'd : 30
Amount Done : 0
Start Date : 09-01-05
Est Finish Date : 09-29-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00

Order Entry No :
OE Value : 0.00

Est Mark Up : 0.000%
Actual Mark Up : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	0.00	0.00	0.00	0.00	0.00
Engineering Hours	0.00	0.00	0.00		
Engineering Cost	0.00	0.00	0.00	0.00	0.00
Production Hours	0.00	0.00	0.00		
Production Cost	0.00	0.00	0.00	0.00	0.00
Packaging Hours	0.00	0.00	0.00		
Packaging Cost	0.00	0.00	0.00	0.00	0.00
OverHead Hours	0.00	0.00	0.00		
OverHead Cost	0.00	0.00	0.00	0.00	0.00
CNC Hours	0.00	0.00	0.00		
CNC	0.00	0.00	0.00	0.00	0.00
Misc. Hours	0.00	0.00	0.00		
Misc.	0.00	0.00	0.00	0.00	0.00
Burden	0.00	0.00	0.00		
Total Cost	0.00	0.00	0.00		
Mark up	0.000	0.000			
Selling Cost	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	0.00	0.00
Profits/(Loss)	0.00	0.00



Phone: 800-253-0421
231-777-3951
Fax: 800-438-1145
231-773-4485

A Division of Reid Entities

2265 Black Creek Road • Muskegon, MI 49444-2684
www.reidsupply.com mail@reidsupply.com



P.O. #: 2008602

Shipper No 03460210-0

Page 1 of 1

Bill To: DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7
Canada

Ship To: DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7
Canada

Phone

Attn:

Customer No	Your P.O. No	Sched Date	Ship Via	Ship Date	Shipper No
215650	2008602	09/09/05	FED-EX INTL ECONO PREPAID	09/23/05	03460210-0

Line	Order Qty	Item	Description	Qty Shipped	Back Order
1	30	PNT-9	T-PIN .250 X 6	30	0
				HS Tariff Code:	820750
				Country of Origin:	United States
				2.19	65.70
2	20	DARS-004	SS DA BL PIN 3/16 X 2.00 RING HANDLE	0	20
				HS Tariff Code:	731829
				Country of Origin:	United States
				40.22	0.00
			Out of stock backorder eta is 3-4 weeks.		
			Per your faxed request we will ship a partial order. Thank you.	Value in US Funds:	65.70
				Terms: Net 30 Days	

Total Number of items: 2

Estimated Weight 4 lb 14.00 oz 2.213 kg

Opr: SRL Branch: 11 SLSM: REID

Picker: CLM

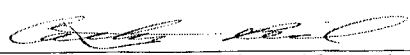
All sales of products by Reid Supply Company are made on the terms contained in Reid Supply Company's standard Terms of Sale, which are incorporated by reference. If buyer has not otherwise agreed to those terms, then buyer's Acceptance of Delivery of, or Payment For, the goods will constitute buyer's agreement to the standard Terms of Sale. Reid Supply Company's standard Terms of Sale are available at www.reidsupply.com or by calling 800-253-0421 and requesting a copy.

CERTIFICATION OF COMPLIANCE

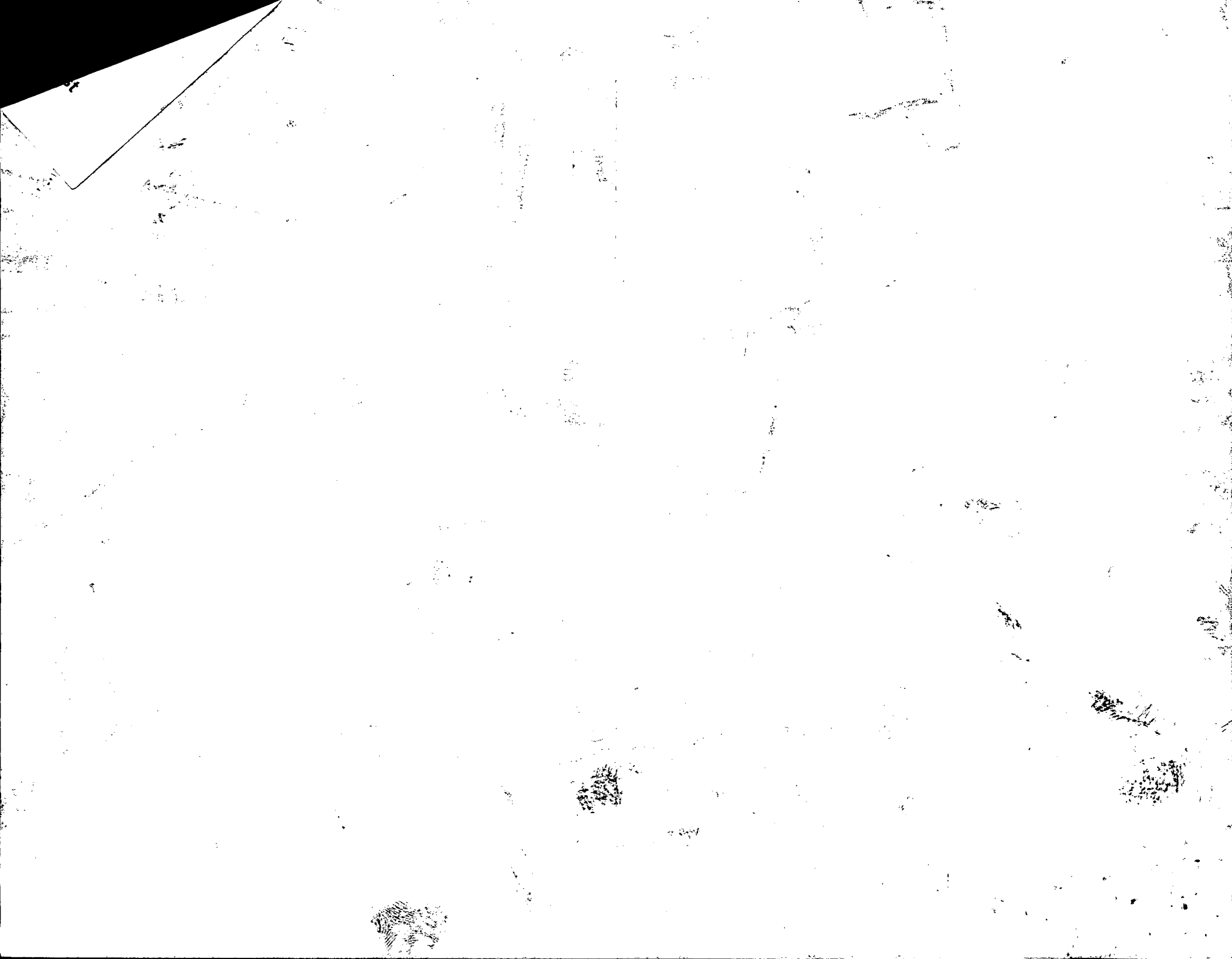
Reid Supply Company and its divisions being ISO-9002 compliant does certify that according to our records the above material purchased was supplied in accordance with the description as illustrated in our catalog.

ALL ITEMS MANUFACTURED IN THE U.S.A UNLESS OTHERWISE NOTED.
THANK YOU VERY MUCH FOR YOUR ORDER

Packing List


Cathy Reid, Document Control Supervisor

Packing List



Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 08, 2005
11:10 am

Work Order No : 0024197
Project Name : *D206-651-041
Project For : WK539
Work Order Type : Main
Main WO Number :
House Part Number : *D206-651-041
Description : 206 A/B GHW Kit
Manufactured : Yes
Amount Req'd : 30
Amount Done : 0
Start Date : 09-01-05
Est Finish Date : 09-29-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	78.02	100.00	0.00	78.02
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	5.00	100.00		
Production Cost :	0.00	134.00	100.00	0.00	134.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	212.02	100.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	212.02			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	(-212.02)

MS 01/08
u
11-15

Date: Tuesday, 15/11/2005 8:39:31 AM
 User: Alba Panzuto

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	206 GHW ADAPTER
Job Number :	24197		
Estimate Number :	10571		
P.O. Number :		Part Number :	D206651041
This Issue :	15/11/2005	S.O. No. :	
Prsht Rev. :	NC	Drawing Number :	N/A
First Issue :	//	Project Number :	
Previous Run :		Drawing Revision :	N/A
	Type :	Material :	
	SMALL /MED FAB	Due Date :	15/12/2005
Written By :		Qty:	30
Checked & Approved By :		Um:	Each
Comment :	Est Rev:F 02.08.14 Re-format KJ		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
-----	----	------------------

**Comment:** DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D206-651-041

2.0	PG	PURCHASING
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**Comment:** PURCHASING

Issue P/O: _____

PNT-9 Lock Pin

Possible Supplier: Reid Tools

Certificate of conformity is required

3.0	PNT9	Lock Pin
-----	------	----------

4.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------

**Comment:** PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
-----	-------------	-------------------------------

**Comment:** SMALL & MEDIUM FAB RESOURCE 1

1-Drill as per Dwg D2711.

2- Deburr.

Date: Tuesday, 15/11/2005 8:39:31 AM
User: Alba Panzuto

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 GHW ADAPTER

Job Number: 24197

Part Number: D206651041

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

7.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Issue P/O: _____

Cad Plate per QQ-P-416F Class I Type II

Ensure Certificate of Conformity is attached

8.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformity is attached

9.0

D2692

Spring Pin Clip

10.0

D2711

Lock Pin

11.0

AN960JD10

Washer

12.0

CBL1240

Cable

13.0

CBL460

Loop Sleeve

14.0

MS21042L3

Nut

15.0

MS27039108

Screw

16.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Cut cable CBL-1240 in half (10.5" each) Remove 2.25" of sleeve from each end of cable CBL-1240

2-Crimp CBL-460 onto CBL-1240 to make (2) D2690-8 as per Dwg D2690. (Leave one end open)

3-Install Lanyard D2690-8 (from open end) into pin D2711 and assemble screw, washer and nut as per Dwg D206-651.

4-Install Lanyard D2690-8 into spring pin D2692 and assemble screw, washer and nut at other loop as per Dwg D206-651.

Date: Tuesday, 15/11/2005 8:39:31 AM
User: Alba Panzuto

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 GHW ADAPTER

Job Number: 24197

Part Number: D206651041

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-651-041

Location: _____

PPP Rev: _____

19.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion



MANCO**DOMPLEX**

8895 Crescent 3

Anjou (Québec) H1J 1B6

Tél.: (514) 355-7867

Fax: (514) 355-8750

CERTIFICAT DE CONFORMITÉ
CERTIFICATE OF COMPLIANCE

#

3358

Dart Aerospace
Client / Customer

2008912

Votre # de commande / Your purchase order #

D2711

de la pièce / part

97176

Notre # de bon de livraison / Our packing slip #

Inspecteur / Inspector <u>Renault</u>	Date, équipe / Date, shift <u>Nov 21, 2005</u>
Placage / Plating <u>QQ-P-416F CLASS II</u>	
Quantité totale / Total quantity <u>27</u>	Quantité inspectée / Inspected quantity <u>27</u>
Adhésion / Adhesion <u>Good</u>	
Épaisseur / Thickness L.C.D. <u>Good</u> H.C.D. Moy. / aver. <u>0.0003</u>	
Coulisses, taches / Leach, spots <u>non</u>	Rugosité / Roughness <u>non</u>
Quantité approuvée / Approved quantity <u>27</u>	Quantité rejetée / Rejected quantity <u>—</u>

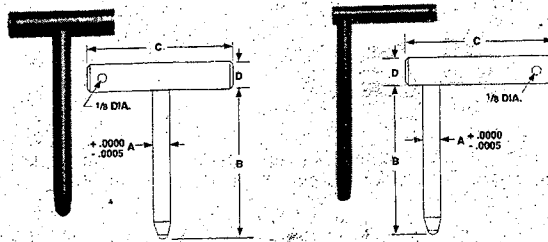
Commentaires / Comments

Nous certifions que les pièces énumérées ci-dessus ont été faites en conformité avec vos dessins et spécifications et rencontrent les exigences contenues dans ces dessins et/ou spécifications.

We hereby certify that the parts listed above have been made in accordance with your drawings and specifications and are correct to the requirements contained in those drawings and/or specifications.

Signé au nom de
Signed on behalf of**MANCO**
DOMPLEX

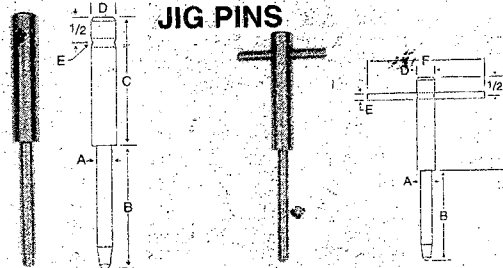
T AND L PINS



T-Pins and L-Pins are designed to be used as a removable locating device for precision alignment of work piece in jigs and fixtures. Heat treated steel. Black oxide-finish.

T-Pin Cat. No.	L-Pin Cat. No.	A	B	C	D	Price Each 1-24
PNT-1	PNL-1	.1250	2 1/2	1 1/2	1/4	1.80
PNT-2	PNL-2	.1875	3	2 1/2	5/16	1.81
PNT-3	PNL-3	.1875	6	2 1/2	5/16	1.94
PNT-7	PNL-7	.2500	3	2 1/2	3/8	2.19
PNT-8	PNL-8	.2500	4	2 1/2	3/8	2.25
PNT-9	PNL-9	.2500	6	2 1/2	3/8	2.31
PNT-11	PNL-11	.3125	3 1/2	3	7/16	2.55
PNT-12	PNL-12	.3125	6	3	7/16	2.70
PNT-13	PNL-13	.3750	4	3 1/2	1/2	2.94
PNT-14	PNL-14	.3750	6	3 1/2	1/2	3.17
PNT-15	PNL-15	.4375	4	3 1/2	9/16	3.18
PNT-16	PNL-16	.4375	6	3 1/2	9/16	3.69
PNT-17	PNL-17	.5000	4	3 1/2	5/8	4.32
PNT-18	PNL-18	.5000	6	3 1/2	5/8	4.55
PNT-21	PNL-21	.6250	6	3 1/2	7/8	5.95
PNT-22	PNL-22	.7500	6	3 1/2	7/8	6.64

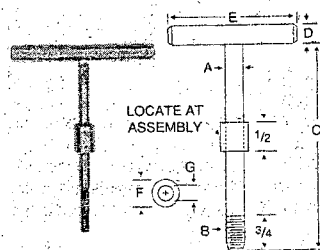
Note: Steel cable assemblies available. See page 243.



Used for accurately aligning holes on mating pieces. Black oxide finish. Handle version converts to T or L handle.

w/o Handle Cat. No.	w/ Handle Cat. No.	A	B	C	D	E	Price Each 1-24 w/o Handle w/ Handle
JGP-110	JGP-210	.2500	2.5	2 5/8	1/2	1/4	5.65 7.28
JGP-120	JGP-220	.3125	2.5	2 5/8	9/16	1/4	5.81 7.49
JGP-130	JGP-230	.3750	4.0	2 5/8	5/8	1/4	6.86 8.53
JGP-140	JGP-330	.5000	3.0	2 5/8	3/4	5/16	7.70 9.58

CLAMPING PINS

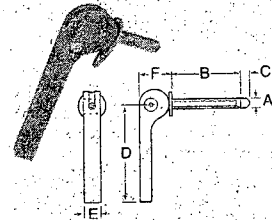


Usually used for clamping materials of various thicknesses. Adjust the bushing at the proper length and weld into position. Black oxide finish.

Cat. No.	A	B	C	D	E	F	G	Price Each 1-24
JGP-003	.193	10-24	3.0	.3120	2.5	3/8	.203	4.89
JGP-006	.249	1/4-20	4.0	.3750	2.5	1/2	.252	6.23
JGP-009	.312	5/16-18	4.0	.4375	3.0	9/16	.315	6.23
JGP-012	.374	3/8-16	4.5	.5000	3.5	5/8	.378	7.70
JGP-018	.499	1/2-13	7.0	.6250	3.5	3/4	.503	8.69
JGP-021	.624	5/8-11	5.5	.8750	3.5	7/8	.628	8.97

EXPANDING DIAMETER PINS

Aerospace Grade



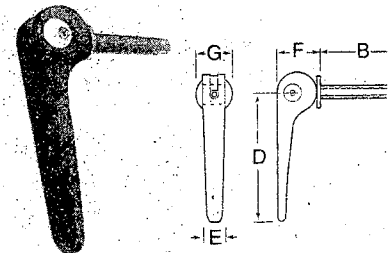
Expanding diameter pins, in relaxed state, provide a tight fit for easy installation and removal. When the cam is pushed, the segments of the pin are pushed out increasing the diameter to .006", providing an extremely tight radial fit. Must be installed so

expanded bushings are contained in the installation. The core pin and bushing assembly are made from 17-4PH steel. The handle is aluminum alloy. The items listed below are in stock for same day shipment. Other sizes available on order. Please call for pricing and delivery.

Cat. No.	Nom. Dia.	Hole Size A	Grip Lgth. B	C	Max. D*	Max. E*	Max. F*	Double Shear Lb.
EXP-10	1/4	.250-.254	1	1/4	3 1/2	9/8	1	7.3
EXP-60	5/16	.312-.317	3	5/16	4 1/2	7/8	1.40	11.1
EXP-63	3/8	.375-.380	1/2	3/8	4 1/2	7/8	1.40	16.1
EXP-65	3/8	.375-.380	3/4	3/8	4 1/2	7/8	1.40	16.1
EXP-70	3/8	.375-.380	1	3/8	4 1/2	7/8	1.40	16.1
EXP-73	3/8	.375-.380	1 1/2	3/8	4 1/2	7/8	1.40	16.1
EXP-90	3/8	.375-.380	3	3/8	4 1/2	7/8	1.40	16.1
EXP-100	3/8	.375-.380	4	3/8	4 1/2	7/8	1.40	16.1
EXP-105	1/2	.500-.505	1	1/2	4 1/2	1	1.40	29.1
EXP-110	1/2	.500-.505	2	1/2	4 1/2	1	1.40	29.1
EXP-120	1/2	.500-.505	3	1/2	4 1/2	1	1.40	29.1
EXP-130	1/2	.500-.505	4	1/2	4 1/2	1	1.40	29.1
EXP-150	5/8	.625-.630	1 1/2	5/8	5 1/2	1 1/4	1.60	46.1
EXP-155	5/8	.625-.630	2	5/8	5 1/2	1 1/4	1.60	46.1
EXP-160	5/8	.625-.630	3	5/8	5 1/2	1 1/4	1.60	46.1

*Maximum dimensions are for reference only. The handles may undersize to allow for operating clearance.

Commercial Grade



Similar to the expanding diameter pins described, commercial grade expanding diameter pins are a cost design for non-critical, commercial applications. The core bushing assembly are made from stainless steel. The black Delrin plastic.

Cat. No.	Nominal Dia.	Hole Size A	Grip Lgth. B	C	D	E	F
EXP-500	1/4	.254-.250	1	.250	3.25	.625	1.00
EXP-505	1/4	.254-.250	1 1/2	.250	3.25	.625	1.00
EXP-510	1/4	.254-.250	2	.250	3.25	.625	1.00
EXP-515	3/16	.317-.312	1	.312	4.50	1.00	1.40
EXP-520	3/16	.317-.312	2	.312	4.50	1.00	1.40
EXP-525	3/8	.380-.375	1	.375	4.50	1.00	1.40
EXP-530	3/8	.380-.375	1 1/2	.375	4.50	1.00	1.40
EXP-535	3/8	.380-.375	2	.375	4.50	1.00	1.40
EXP-540	3/8	.380-.375	3	.375	4.50	1.00	1.40
EXP-555	1/2	.505-.500	2	.500	4.50	1.00	1.40

Bold catalog numbers conform to TCMAI standards.